

Appln No. 09/694,079  
Amdt date February 10, 2006  
Reply to Office action of August 10, 2005

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1-25. (Canceled)

26. (Currently Amended) The system of claim 28 wherein said timing ~~information~~ data comprises one of timestamp information, timecode information, frame numbering information and global time of day.

27. (Previously Presented) The system of claim 28 wherein said receiver synchronizes said annotation data with said video signal in response to said timing information.

28. (Currently Amended) A hyperlinked reception system comprising:  
a receiver in communication with a broadcast channel; and  
a display device in communication with said receiver,  
wherein said receiver decodes a digital broadcast signal to recover a video signal, mask data, and annotation data included in the broadcast signal, the ~~annotation~~ mask data including graphics data included in the broadcast signal for each of a plurality of video frames of the video signal and the annotation data including information on a video object appearing on each of the plurality of video frames, wherein at least the mask data is compressed based on a compression algorithm overlaying a graphics image on a video frame;

wherein, in response to a viewer request, said display device draws ~~[[the]]~~ a graphics image on a frame-by-frame basis based on the graphics data for ~~at least a plurality of frames of a video carried by the video signal~~ the corresponding video frame, the drawing of the graphics image being synchronized to ~~an underlying~~ the corresponding video frame based on timing data associated with the graphics data.

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29-32. (Canceled)

33. (Previously Presented) The system of claim 28, wherein said annotation data comprises information regarding goods and services for sale.

34. (Previously Presented) The system of claim 28, wherein said annotation data comprises non-commercial information.

35. (Previously Presented) The system of claim 28 wherein said annotation data further includes at least one of textual data and graphics data.

36. (Currently Amended) The system of claim 35 wherein said mask data includes location information of [[an]] the video object in ~~an annotated~~ the corresponding video frame.

37. (Previously Presented) The system of claim 36 wherein said location information includes a graphics location reference that represents a fixed relation to a set of pixels associated with said object.

38. (Previously Presented) The system of claim 37 wherein said graphics location reference includes an upper left most pixel in said associated pixel set.

39. (Previously Presented) The system of claim 37 wherein said graphics location reference includes a centroid pixel of said associated pixel set.

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40. (Currently Amended) The system of claim 35 wherein said mask data comprises location and shape information of ~~[[an]]~~ the video object in ~~an annotated~~ the corresponding video frame.

41. (Previously Presented) The system of claim 40 wherein said shape information is represented by a graphical overlay of said object.

42. (Previously Presented) The system of claim 40 wherein said shape information is represented by an outline of said object.

43. (Previously Presented) The system of claim 40 wherein said shape information is represented by a mathematical representation of a set of pixels associated with said object.

44-48. (Cancelled)

49. (Currently Amended) The system of claim 28, further comprising:  
means for transmitting information related to said viewer request to a remote location over a backchannel communications channel.

50. (Previously Presented) The system of claim 28, further comprising:  
means for accepting from a viewer information regarding a commercial transaction, and completing said transaction.

51. (Previously Presented) The system of claim 50, wherein the information regarding a commercial transaction accepted from a viewer comprises at least one of a viewer's identifier, a viewers address, an identifier of a viewer's financial account, a viewer's password, a

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viewer's personal identification number, a quantity, a model, a size, a color, a descriptor of a good or service to be vended, and a price.

52. (Currently Amended) The system of claim 28, wherein the annotation data includes a plurality of annotations having equal timing information, and the viewer request includes an indication as to which annotation of the plurality of annotations is to be displayed ~~are different from one another.~~

53. (Currently Amended) A hyperlinked reception system comprising:  
a receiver receiving video, mask, and annotation data[,] included in a digital broadcast signal, the ~~annotation mask~~ data including graphics data for ~~overlaying a graphics image on a video frame, object data for an object appearing on a portion of the video, and timing data~~each of a plurality of video frames of a video signal and the annotation data including information on a video object appearing on each of the plurality of video frames, wherein at least the mask data is compressed based on a compression algorithm;

a data store coupled to the receiver for storing at least a portion of the received mask and annotation data; and

means for drawing the graphics image on a frame-by-frame basis based on the graphics data for ~~at least a plurality of frames of the video~~ the corresponding video frame, the drawing of the graphics image being synchronized to ~~an underlying~~ the corresponding video frame based on timing data associated with the graphics data.

54. (Currently Amended) The system of claim 53, wherein the ~~image overlay mask~~ data includes a timestamp transmitted with broadcast of the mask data, the mask data visually identifies ~~identifying~~ the object in the ~~portion of the~~ corresponding video frame.

55. (Currently Amended) The system of claim 53, wherein the ~~image overlay mask~~ data includes location of the object.

56. (Currently Amended) The system of claim 53, wherein the ~~image-overlay~~ mask data includes shape information of the object.

57. (Currently Amended) The system of claim 53, wherein the annotation data includes ~~second~~ timing data, the system comprising:

means for removing the annotation data from the data store in response to a determination based on the ~~second~~ timing data that the annotation data is no longer used in the video.

58-62. (Canceled)

63. (Currently Amended) The system of claim 53, wherein the ~~object~~ annotation data includes user selectable information, and the system further comprises:

means for engaging in an electronic commerce transaction in response to a user selection of the user selectable information.

64. (Currently Amended) A hyperlinked broadcast system comprising:  
a video source;  
a video encoder in communication with said video source, said video encoder producing a transport stream;

an ~~annotation-source~~ authoring tool providing mask and annotation data, the mask data including graphics data for each of a plurality of video frames provided by the video source and the annotation data including information on a video object appearing on each of the plurality of video frames, wherein at least the mask data is compressed based on a compression algorithm overlaying a graphics image on a video frame;

a data packet stream generator in communication with said ~~annotation-source~~ authoring tool and said video encoder, said data packet stream generator producing encoded data packets;  
and

a multiplexer system in communication with said video encoder and said data packet stream generator, said multiplexer generating a digital broadcast signal comprising an augmented transport stream from said transport stream and said encoded data packets,

wherein said video encoder provides timing information for each ~~video frame for at least~~ a of the plurality of video frames provided by the video source[[,]] to said data packet stream generator, and said data packet stream generator steps through the plurality of video frames and associates the timing information of each video frame to the graphics data,

wherein, a receiver receiving the plurality of video frames and the graphics data synchronizes drawing of the graphics image based on the graphics data, to an underlying frame, based on the timing information.

65. (Previously Presented) The system of claim 64 wherein said timing information comprises one of timestamp information, timecode information, frame numbering information and global time of day.

66. (Previously Presented) The system of claim 64 wherein said annotation data further comprises at least one of textual data and graphics data.

67. (Currently Amended) The system of claim 64 wherein said ~~image overlay mask~~ data includes location information of [[an]] the object in ~~an annotated~~ the corresponding video frame.

68. (Previously Presented) The system of 67 wherein said location information includes a graphics location reference that represents a fixed relation to a set of pixels associated with said object.

69. (Previously Presented) The system of claim 68 wherein said graphics location reference includes an upper left most pixel in said associated pixel set.

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70. (Previously Presented) The system of claim 68 wherein said graphics location reference includes a centroid pixel of said associated pixel set.

71. (Currently Amended) The system of claim 64 wherein said ~~image overlay~~ mask data comprises location and shape information of the object in the corresponding video frame ~~to be annotated~~.

72. (Previously Presented) The system of claim 71 wherein said shape information is represented by a graphical overlay of said object.

73. (Previously Presented) The system of claim 71 wherein said shape information is represented by an outline of said object.

74. (Previously Presented) The system of claim 71 wherein said shape information is represented by a mathematical representation of a set pixels associated with said object.